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SYNOPSIS OF THE NORTH AMERICAN HYPOCREACEAE, WITH DESCRIPTIONS OF THE SPECIES.

BY J. B. ELLIS AND B. M. EVERHART.

(Continued from page 125.)

125. DIALONECTRIA DISPERSA (C. & E.) Grev. V, p. 33. On (pine)? bark, Maine. Rev. Joseph Blake.

Perithecia widely scattered, ovate, papillate, light red, about one half millim. high, sparingly clothed with pale, weak, glandular hairs; asci cylindrical, 70—80 x 10—12 μ; sporidia subbiseriate or obliquely uniseriate, oblong-elliptical or almond-shaped, often more prominent on one side, 18—22 x 7—10 μ, ends subacute while lying in the asci, rounded when free, 2—4-nucleate, becoming uniseptate. Cooke finds triseptate, curved conidia 50 μ long. We have not seen them.

126. DIALONECTRIA VITICOLA (B. & C.) Grev. IV, p. 45. "On branches of vine, Alabama. Peters, No. 5225.

"Scattered, bright crimson, soft, collapsing laterally, seated on a thin, white mycelium; sporidia uniseriate, elliptical, uniseptate." In Grev. XII, p. 82, Cooke gives the measurements of the sporidia as 10 x 4 μ.

127. DIALONECTRIA EUCALYPTI, Ck. & Hark. Grev. XII, p. 82. On bark of *Eucalyptus* branches, California (Harkness).

Scattered, superficial, pale: perithecia globose, at length subdepressed (2 millim.), at first beset with papillose, hyaline hairs, finally bare; asci clavate, 8-spored; sporidia lanceolate, uniseptate, not constricted, hyaline, 16—18 x 4 μ.

128. DIALONECTRIA SQUAMULOSA (Ell.) Bull. Torr. Bot. Club IX, p. 20. On decaying wood of a fallen limb, Newfield, N. J., November, 1881.

Gregarious, minute (75—100 μ), pale, ovate-globose, covered, except the brownish, obtuse, slightly prominent ostiolum, with a light-colored, squam-

ulose coat; asci lanceolate, narrowed and subtruncate above, 25—30 x 5—6 μ, containing eight clavate or cylindric-oblong, biseriate sporidia, 5—6 x 1¼—1½ μ, 2-nucleate at first and probably becoming uniseptate.

(b.) *Growing on herbaceous stems, or leaves, fruits, etc.*

129. DIALONECTRIA BRASSICÆ (Ell. & Sac.) Mich. II, p. 374. On dead cabbage stalks left in the ground over winter and on old potato stems, Newfield, N. J., July, 1880 and 1881.

Perithecia densely gregarious, globose-conoid, not collapsing, very small (⅛ millim.), blood-red, ostiolum rather obtuse-conic, texture loosely-cellular, rose-tinted, those around the ostiolum paler; asci clavate-cylindrical, 60 x 7—8 μ, without paraphyses, briefly-stipitate, obtuse at the apex, containing eight oblong, subclavate, hyaline, uniseptate, 10—11 x 4—4½ μ sporidia. This was first found on the cabbage stalks and at about the same time next year on old potato stalks lying scattered over the same ground previously occupied by the cabbages. None could be found on any potato stalks in any other part of the field.

130. DIALONECTRIA THUJANA (Rehm.) Ascom., No. 338. Sacc. Syll. II, p. 493. On dead foliage of white cedar not yet fallen from the branches of a tree cut some time previously, Newfield, N. J. (November, 1875.) ?

Perithecia very minute, scarcely visible to the naked eye, solitary or 2—3 together, conic-globose, slightly depressed at the apex, purplish-red; asci oblong-elliptical, 60—80 x 10—14 μ, with eight biseriate, oblong, two-celled, hyaline sporidia, slightly constricted in the middle and about 11 x 7 μ, becoming at length subfuscous.

131. DIALONECTRIA DEPALLENS, Ck. & Hark. Grev. XII, p. 82. On stems of *Lupinus*, California. Harkness, No. 2432.

Scattered or gregarious, superficial, brick-red, fading out; perithecia subglobose, smooth, bare, opaque (one fifth to one fourth millim.); asci clavate, 8-spored; sporidia lanceolate subacute at each end, uniseptate, not constricted, hyaline, 22—24 x 4—4½ μ.

132. DIALONECTRIA DEPAUPERATA (Cke.) Grev. VII, p. 50. On *Yucca aloifolia*, Aiken, So. Car. Ravenel, No. 2564.

Perithecia globose, scarlet, scarcely papillate, 1—3 in a stroma (*Fusarium Yuccæ*); asci clavate; sporidia elliptical, uniseptate, 10 x 3½ μ; stylospores fusiform, curved, acute at each end, 25 x 3 μ. We have never seen the original specimens on *Yucca* and have copied the foregoing from Grevillea.

The specimens in N. A. F., 677, on *Clethra* (or *Andromeda?*) were submitted to Dr. Cooke, who remarked that they did not differ, either in habit or in fruit, from his *Nectria depauperata*, though on a very different host plant. From an examination of these specimens, we add the following notes: Perithecia ovoid-globose, small (160—190 μ), pale and furfuraceous at first, becoming bare and pale red; ostiolum papillate and slightly darker; asci clavate-cylindrical, 35—40 x 4 μ, sessile; sporidia oblong-elliptical, subbiseriate, 9—11 x 3—3½ μ. There are often six and even ten perithecia on each erumpent, white, byssino-grumose stroma.

133. DIALONECTRIA GALII, Plow. & Hark. Trans. Cal. Acad. Sci., 1884, p. 26.

Perithecia scattered, immersed, then erumpent, obtuse, pale-red; asci cylindrical, very delicate, 60 x 5—8 μ; sporidia eight, uniseriate, uniseptate, pale straw-color, oblong-oval, with bluntly-pointed ends. On *Galium trifolium*, California. Harkness.

134. DIALONECTRIA PEPONUM (B. & C.) Grev. IV, p. 16. *Nectria perpusilla*, B. & C. Rav. Fung. Car. Exsic. IV, p. 51. On dead gourds and on tomato, So. Car. Ravenel.

Very small, scattered, scarlet; sporidia oblong, uniseptate. It looks at first sight as if seated on a smooth, white mycelium, but it is only the external coat of the gourd. Var. *aurelia* (l. c.), having sporidia continuous, is probably only the immature state of the same thing.

We add the following from an examination of the specimen in Ravenel's Exsiccati, above quoted: Perithecia depressed globose, 100—120 μ in diam., ostiolum broad, papillate; asci clavate-cylindrical, 35—40 x 5—6 μ; sporidia not well matured, but apparently about 10 x 3½ μ.

135. DIALONECTRIA CONIGENA (E. & E.) Bull. Torr. Bot. Club X, p. 77. On an old decaying cone of *Magnolia glauca*, Newfield, N. J., October.

Minute, membranaceous, smooth, orange yellow, lighter and collapsing when dry; asci about 50 x 7 μ; sporidia uniseriate or partially biseriate above, acutely elliptical, 2-nucleate, becoming uniseptate, 7—8 x 3—3½ μ; ostiolum papilliform, minute; perithecia with a few weak, white, radiating hairs at the base. Differs from *N. vulpina*, Cke., in its habitat, smaller and paler perithecia and rather narrower and more acute sporidia.

(c.) *Growing on cryptogamous plants.*

136. DIALONECTRIA EPISPHÆRIA (Tode.) Fr. Summ. Veg. Scand., p. 388. On various *sphæriaceous* fungi — *Diatrype*, *Hypoxylon*, *Valsa*, etc. common.

Perithecia gregarious or scattered, superficial, subsphæroid, collapsing and frequently subcompressed, soft, smooth, blood-red, about 180 μ in diam., with a papilliform ostiolum; asci cylindrical, 50—60 x 5—6 μ, 8-spored; sporidia obliquely uniseriate, subellipsoid, rather unequally uniseptate, hyaline, slightly constricted, 7—10 x 4—5 μ.

137. DIALONECTRIA FILICINA, Ck. & Hark. Grev. XII, p. 101. "On stipes of tree fern, California (Harkness.)

"Scattered or gregarious, orange-colored; perithecia obovate, smooth, glabrous, subshining, scarcely papillate; asci cylindrical, 8-spored; sporidia elliptico-cylindrical, obtuse at each end, hyaline, 8 x 2½ μ." Our specimens from Dr. Harkness have the asci about 40 x 5 μ; sporidia mostly biseriate, 3—4-nucleate, becoming uniseptate, 7—10 x 2½—3 μ.

C. *Sporidia elongated, guttulate or septate.* (*Calonectria.*)

138. DIALONECTRIA CURTISII, Berk. Grev. IV, p. 46. On *Zea*, So. Car. Ravenel.

"Minute, erumpent, scattered; asci lanceolate; sporidia oblong, curved, with four nuclei, 12 x 2 μ." We have seen no specimens of this.

139. DIALONECTRIA CHLORINELLA, Cke. Grev. XI, p. 108. Rav. F. Am., 736. On bark of *Ulmus*, seaboard of So. Car. Revenel.

Scattered, superficial, globose, lemon-yellow; perithecia wooly-tomentose, papillate, with ostiolum bare; asci clavate; sporidia elongated-elliptical, obtuse at each end, straight, or a little curved, 1—3-septate, hyaline, 18—20 x 5 μ. This species also ranges northward. It has been found on blackened wood of decaying oak limbs and on wood of *Rhus*, at Newfield, N. J., and has also been sent on rotten wood from Canada by Prof. Macoun. Prof. C. H. Peck has also found it in New York state. It might, with propriety, be placed in the genus *Lophiostoma*, as it has the peculiar compressed ostiolum of that genus and its sporidia are also indicative of that relationship. The specimens in our copy of Rav. F. Am. are immature, though evidently the same as the Newfield and Canada specimens. The latter have the sporidia fusiform, slightly curved, subhyaline, 1—3-septate and constricted at the middle septum. 25—35 x 7—8 μ—very few less than 30 μ long; asci 100—120 x 12—15 μ, with abundant paraphyses. Really this should be placed in *Lophiostoma*.

140. DIALONECTRIA ERUBESCENS (Desm.) Sacc. Syll. II, p. 545. On the under side of living leaves of *Quercus laurifolia*, *Myrica cerifera* and *Olea Americana*, Florida (Dr. Martin and W. W, Calkins). Mostly on mycelium of *Meliola*.

Scattered or gregarious, superficial, with white, wooley, radiating hairs at base; perithecia minute, pale red, globose, finally collapsing, soft, glabrous, with a papilliform ostiolum; asci clavate, 35—40 x 7—8 μ; sporidia oblong-fusoid, straight or slightly curved, hyaline, 3—4-nucleate, becoming 1—3-septate, ends subacute (10 x 3 μ, Sacc.) Specimens on *Olea* have the sporidia 12—16 x 2½—3 μ. *Calonectria leucorrhodina* (Mont.), Sacc. Syll. II, p. 548, according to So. American specimens from Spegazzini, scarcely differs from this, except in its epiphyllous growth.

141. DIALONECTRIA DIPLOA, B. & C., var. *diminuta*. Grev. IV, p. 46. On some sphæria, on alder, So. Car. Ravenel.

"Very minute, scarlet; asci lanceolate, but obtuse; sporidia sometimes larger, binucleate, at length uniseptate, in one row, or smaller, biseriate, quadrinucleate, 25—30 μ long."

142. DIALONECTRIA FULVIDA, E. & E. Journ. Mycol. I, p. 140. On bark of decaying oak limb lying on the ground, Newfield, N. J., Oct. 7th, 1885.

Perithecia superficial, gregarious, subglobose, small (one sixth millim.), tuberculose-squamulose, light yellow, collapsing when dry; ostiolum large, but not prominent; asci oblong-cylindrical, nearly sessile, obtuse, about 75 x 10—12 μ, surrounded by indistinct paraphyses;

sporidia eight in an ascus, fusiform, hyaline or nearly so, slightly curved, 38—50 x 3—3½ μ, tapering from the middle to each end, nucleate, becoming about 8-septate. The specimens were growing on the bark of an old swelling caused by *Dichæna strumosa*, Fr.

143. DIALONECTRIA COCCICOLA, E. & E. Journ. Mycol. II, p. 39. On scale lice on bark of living orange trees, Florida. Com. Prof. F. L. Scribner.

Perithecia cæspitose, membranaceous, about one third millim. in diam. and one half millim. high, flesh-color, becoming dirty buff when mature, obovate, astomous, surface roughish, with a few scattered, white, rudimentary hairs, or at length bald; asci clavate-cylindrical, 150—190 x 20 μ, with abundant, rather stout paraphyses; sporidia eight in an ascus, clavate-cylindrical, multinucleate, hyaline, 110—140 x 6—7 μ at the upper end, attenuated below. The groups of perithecia are seated either on the shells of dead insects or on the bark itself, with a subiculum more or less distinct, composed of white, decumbent or prostrate hairs of the same character as those found on the perithecia themselves. The species seems to be quite distinct from any of those described under the subgenus *Ophionectria*, where this belongs.

144. DIALONECTRIA FIBRISEDA, Schw. Syn. N. Am., 1542. Among the loosened fibres of chestnut bark, Bethlehem, Pa. (Schweinitz). Allied to *Nectria sanguinea*.

Very minute, scattered, blood-red, pellucid, globose-ovate, papillate, adhering in dense clusters to the fibres of (dead) chestnut limbs from which the epidermis has peeled off, entirely glabrous, finally collapsing, scarcely visible to the naked eye. Of this species, nothing is known to us except the description above quoted.

Cooke, in his synopsis, mentions a *Nectria Smilacis*, Sz. We find no such species in Schw. Synopsis.

(To be continued.)

OBITUARY.

With feelings of deepest regret, we have to announce the death of our colleague and friend, Dr. Geo. Martin, who died at his home in West Chester, Pa., Oct. 28th, 1886, in the sixtieth year of his age. Since 1878, Dr. M. has devoted much time to mycological studies, especially to the examination of the parasitic leaf fungi, and only a few days before his death had completed a "Synopsis of the North American Species of *Septoria*," as a continuation of the series of mycological papers he had already contributed. Having been for some years past in constant correspondence with him, we had come to place great reliance on his opinion

in the determination of these often doubtful productions and cannot as yet fully realize how much his advice and assistance will be missed.

The following brief sketch of his life is taken from a West Chester paper:

"Dr. George Martin was born near Claymont, Delaware county, Pa., and received his early education at the Westtown Friends' Boarding School, after which he became a student at the Pennsylvania University, where he graduated in medicine about 1847. He first practiced his profession at Concordville, Delaware county, where he remained about three years. Owing to delicate health, he next became connected with the Fifth Street Dispensary, Philadelphia, in which he remained some five years, at the expiration of which time he engaged with his cousin, John M. Sharpless, in the latter's chrome works in the city of Chester. During the war, he was connected with soldiers' hospitals in Chester, and in which he rendered efficient and untiring services. In 1866 he came to West Chester, where he continued to live until the time of his death. During the last eight or ten years, his health was such as to lead him and his wife to pass the winter season in Florida, they leaving here in the fall and returning late in the spring. This year his disease—that of kidney troubles—became more alarming during the summer, until about ten days ago, when it became evident that he could not survive. At the time of his death, he was one of the managers of the Pennsylvania Training School at Media, also a bright member of the Chester County Medical Society, and during his active practice was a member of the College of Physicians, of Philadelphia.

In his demise, the medical profession loses one of its shining lights, he having devoted many years to schooling himself in the knowledge relating to all that pertained thereto. In scientific pursuits, he was also a close and learned student, as well as a botanist of such note as to lead him into close associations with the leading botanists of the day, his principal study in this department being that of fungi. Dr. Martin was a genial and good citizen. Plain and retiring in his manners, he was beloved by all and honored at home and abroad, and well may it be said that a truly good man has been taken from our midst." J. B. E.

CORRECTIONS.

In the "Catalogue of Lichens" (p. 112), occur typographical errors kindly pointed out by Mr. Willey, who is in that article referred to as having identified most of the species. He disclaims responsibility for the list, especially for Nos. 44, 45, 50, 53, 57, 63 and 68. Correct errors as follows: Place a "?" before 18; in 38 change "r" in *Eristathiana* to "u;" in 55 erase final "i" in Augustinii; in 69 change "e" in *Mycoperum* to "o."

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